

REMARKS

I. Introduction

With the cancellation herein without prejudice of claims 16 to 24, claims 1 to 8 and 10 to 15 are pending in the present application. In view of the foregoing amendments and following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

II. Objection to Claims 4 to 6, 12 and 14

The Final Office Action objects to claims 4 to 6, 12 and 14 on the basis that claims 4 to 6, 12 and 14 are allegedly not in proper Markush format. Applicants respectfully traverse this objection. While a Markush group may be an acceptable form of alternative expression, the Markush group format is not a required format for alternative expressions. Indeed, "[a]lternative expressions are permitted if they present no uncertainty or ambiguity with respect to the question of scope or clarity of the claims." M.P.E.P. § 2173.05(h). It is respectfully submitted that claims 4 to 6, 12 and 14 adequately set forth alternative expressions and that the format of these claims is not objectionable. Withdrawal of this objection is therefore respectfully requested.

Claim 7 was objected to under 37 C.F.R. § 1.75(c) as allegedly of improper dependent format. Claim 1 has been amended herein, without prejudice, and it is believed and respectfully submitted that claim 7 consequently in proper dependent format. Applicants respectfully request withdrawal of the objection of claim 7.

III. Rejection of Claims 1 to 8, 10, 13 and 14 Under 35 U.S.C. § 102(b)

Claims 1 to 8, 10, 13 and 14 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,259,247 ("Bantien"). Applicants respectfully submit that Bantien does not anticipate the present claims for the following reasons.

Claim 1 relates to a micromechanical component. Amended claim 1 recites a supporting body, at least one at least partially unsupported membrane connected to the supporting body. Claim 1 further recites at least one stabilizing element provided in an unsupported area on some areas of a surface of the at least one membrane, wherein the at least one membrane extends continuous over an

entire recess etched in the supporting body, and a portion of the at least one stabilizing element contacts only the membrane for a part less than a whole length of the recess of the membrane and a portion of the at least one stabilizing element is positioned between the supporting body and the at least one membrane. Support for the amendments to claim 1 may be found, for example, in Figure 2.

Bantien allegedly relates to a sensor. The Final Office Action alleges that the Bantien additional mass 13 prevents unintended deformation of the membrane. Applicants respectfully submit that the additional mass 13 Bantien always contacts the frame 11 of a silicon substrate or a separate fastening web 14. Figs. 1 to 6. As a result, Bantien does not disclose, or even suggest, the configuration of amended claim 1, including at least one stabilizing element which contacts only the membrane for a part less than a whole length of the recess of the membrane and a portion of the at least one stabilizing element is positioned between the supporting body and the at least one membrane.

To anticipate a claim, each and every element as set forth in the claim must be found in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, “[t]he identical invention must be shown in as complete detail as is contained in the . . . claim.” Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the prior art must describe the elements arranged as required by the claims. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). As more fully set forth above, it is respectfully submitted that Bantien does not disclose, or even suggest, all of the limitations of claim 1, including at least one stabilizing element which contacts only the membrane for a part less than a whole length of the recess of the membrane and a portion of the at least one stabilizing element is positioned between the supporting body and the at least one membrane. It is therefore respectfully submitted that Bantien does not anticipate amended claim 1.

As for claims 2 to 8, 10, 13 and 14, which ultimately depend from claim 1 and therefore include all of the limitations of claim 1, it is respectfully submitted that Bantien does not anticipate these dependent claims for at least the same reasons given above in support of the patentability of amended claim 1.

IV. Rejection of Claims 11, 12 and 15 Under 35 U.S.C. § 103(a)

Claims 11, 12 and 15 were rejected under 35 U.S.C. § 103(a) as unpatentable over Bantien in view of U.S. Patent No. 4,975,390 ("Fujii et al."). Applicants respectfully submit that the combination of Bantien and Fujii et al. does not render obvious claims 11, 12 and 15 for the following reasons.

Claims 11, 12 and 15 depend from claim 1 and therefore include all of the limitations of claim 1.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

As an initial matter, 35 U.S.C. §103(a) requires that obviousness be determined at the time of the invention. Applicants respectfully submit that the Final Office Action does not allege that Bantien and Fujii et al. would have been combined at the time of the invention to provide the features of claims 11, 12 and 15. As the Final Office Action rejection is insufficient in this regard, Applicants respectfully request withdrawal of the rejections to claims 11, 12 and 15.

Applicants also respectfully submit that the combination of Bantien and Fujii et al. does not disclose, or even suggest, the features of amended claim 1. Fujii et al. provide a total of twelve embodiments. Applicants will discuss each of the embodiments for completeness.

As more fully set forth above, Bantien does not disclose, or even suggest, at least one stabilizing element which contacts only the membrane for a part less than a whole length of the recess of the membrane and a portion of the at least one stabilizing element is positioned between the supporting body and the at least one membrane.

The addition of Fujii et al. does not cure the deficiencies of Bantien. Fujii et al. first embodiment fails to disclose or suggest, as provided in Figures 1e to 1g, 2, 3, 4, 5, and 6, at least one stabilizing element which contacts only the membrane for a part less than a whole length of the recess of the membrane and a portion of the at least one stabilizing element is positioned between the supporting body and the at least one membrane. As illustrated, and described, the Fujii et al. first embodiment provides films 7 and 8 which extend over a whole length recess 3. The Fujii et al. first embodiment, therefore, fails to provide at least one stabilizing element which contacts only the membrane for a part less than a whole length of the recess of the membrane and a portion of the at least one stabilizing element is positioned between the supporting body and the at least one membrane.

As illustrated in Figures 7a, 7b and 7c, the Fujii et al. second embodiment fails to disclose, or even suggest, at least one stabilizing element which contacts only the membrane for a part less than a whole length of the recess of the membrane and a portion of the at least one stabilizing element is positioned between the supporting body and the at least one membrane. Fujii et al. provide full length films 31 and 32 over recess 3, contrary to the required features of amended claim 1. In Figures 8a to 8c, the Fujii et al. third embodiment also fails to disclose this configuration, wherein films 7 and 8 are extend fully over the entire recess 3. In Figures 9a to 9e, the Fujii et al. fourth embodiment also fails to provide this configuration where a lone film 5 extends over recess 5. In Figures 10a to 10d, the Fujii et al. fifth embodiment fails to disclose, or even suggest, at least one stabilizing element which contacts only the membrane for a part less than a whole length of the recess of the membrane and a portion of the at least one stabilizing element. In Figures 11a to 11e, 12a to 12g and 13a to 13e, the Fujii et al. sixth and seventh embodiments fail to disclose, or even suggest, at least one stabilizing element which contacts only the membrane for a part less than a whole length of the recess of the membrane and a portion of the at least one stabilizing element is positioned between the supporting body and the at least one membrane. The Fujii et al. sixth and seventh embodiments also fail to disclose, or even suggest, at least one at least partially unsupported membrane positioned on and directly contacting the supporting body.

The Fujii et al. eighth to twelfth embodiments also fail to disclose at least one stabilizing element which contacts only the membrane for a part less than

a whole length of the recess of the membrane and a portion of the at least one stabilizing element is positioned between the supporting body and the at least one membrane wherein each of the films provided extend over the entire recess provided in the silicon substrate 1.

As the combination of Bantien and the Fujii et al. embodiments does not disclose or suggest the features of amended claim 1, including at least one stabilizing element which contacts only the membrane for a part less than a whole length of the recess of the membrane and a portion of the at least one stabilizing element is positioned between the supporting body and the at least one membrane, Applicants respectfully submit that the combination of Bantien and Fujii et al. do not render obvious claims 11, 12 and 15 which ultimately depend from claim 1.

The Final Office Action alleges that "[t]he exact thickness of the stabilizing element and the membrane is deemed to be a cause effective variable," Final Office Action at p. 4, but provides no support whatsoever for this conclusory statement. The Final Office Action further alleges that "[i]t would have been obvious to one having ordinary skill in the art to have determined the optimum value of a cause effective variable such as combined thickness of the stabilizing element and the membrane through routine experimentation in the absence of a showing of criticality in the claimed combined thickness." Office Action at p. 4. However, a particular parameter must be recognized -- not merely "deemed" in an Office Action -- as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of such variable might be characterized as routine experimentation. In re Antonie, 559 F.2d 618, 195 U.S.P.Q. 6 (C.C.P.A. 1977). It is respectfully submitted that the assertions contained in the Final Office Action that "[t]he exact thickness of the stability element and the membrane is deemed to be a cause effective variable" are nothing more than pure speculation and conjecture. Therefore, the unsupported contentions that determining the optimum value of the combined thickness of the stabilizing element and the membrane cannot support an obviousness determination. Applicants therefore respectfully request withdrawal of this rejection for this additional reason.

V. Conclusion

It is therefore respectfully submitted that all pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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